Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A controller for a mobile body driven by a synchronous motor via a drive unit, comprising:

a rotor position estimator which estimates a magnetic pole position of a rotor of said synchronous motor based on electrical quantities in relation to electric power supplied to said synchronous motor; and

a mobile body position estimator which estimates the position of said mobile body ~~based on~~ from the magnetic pole position estimated by said rotor position estimator, said position of said mobile body being changed corresponding to a distance that said mobile body travels due to the revolution of said motor.

2. (Original) A mobile body controller as claimed in Claim 1, further comprising a motor speed command generator which controls the speed of said synchronous motor based on the position command and the position of said mobile body estimated by said mobile body position estimator.

3. (Previously Presented) A mobile body controller as claimed in Claim 1, further comprising a mobile body position indicator which displays information

on the position of said mobile body estimated by said mobile body position estimator.

4. (Previously Presented) A mobile body controller as claimed in Claim 1, further comprising position information correcting means which corrects the position of said mobile body estimated by said mobile body position estimator based on absolute position information of said mobile body.

5. (Original) A mobile body controller as claimed in Claim 4, wherein said absolute position information is position information obtained when said mobile body passes by a fixed point installed in the traveling area of said mobile body.

6. (Original) A mobile body controller as claimed in Claim 5, wherein correcting operation by said position information correcting means is enabled when said mobile body exists in the vicinity of said fixed point.

7. (Previously Presented) A mobile body controller as claimed in Claim 1, wherein the initial value of the position of said mobile body estimated by said mobile body position estimator is set based on the absolute position information of said mobile body.

8. (Currently Amended) A method of controlling a mobile body driven by

a synchronous motor via a drive unit, the method comprising the steps of:

estimating a magnetic pole position of a rotor of said synchronous motor based on electrical quantities in relation to electric power supplied to said synchronous motor, and

estimating the position of said mobile body ~~based on~~ from said magnetic pole position estimated in the previous step, said position of said mobile body being changed corresponding to a distance that said mobile body travels due to the revolution of said motor.

9. (Original) A method of controlling a mobile body as claimed in Claim 8, comprising the further step of:

correcting the position of said mobile body estimated by said second step based on absolute position information of said mobile body.

10. (Original) A method of controlling a mobile body as claimed in Claim 8, comprising the further step of:

setting the initial value of the position of said mobile body estimated by said first step based on absolute position information of said mobile body.

11. (Currently Amended) A mobile body system, comprising:

a mobile body driven by a synchronous motor via a drive unit; and

a controller which controls the speed of said synchronous motor so that the position of said mobile body approaches the position command,

said controller having

a rotor position estimator which estimates a magnetic pole position of a rotor of said synchronous motor based on electrical quantities in relation to electric power supplied to said synchronous motor,

a mobile body position estimator which estimates the position of said mobile body ~~based on~~ from the magnetic pole position estimated by said rotor position estimator, and

a motor speed command generator which controls the speed of said synchronous motor based on the position command and the position of said mobile body estimated by said mobile body position estimator, said position of said mobile body being changed corresponding to a distance that said mobile body travels due to the revolution of said motor.

12. (Original) A mobile body system as claimed in Claim 11, further comprising position information correcting means which corrects the position of said mobile body estimated by said mobile body position estimator based on absolute position information of said mobile body.

13. (Original) A mobile body system as claimed in Claim 11, wherein the initial value of the position of said mobile body estimated by said mobile body

position estimator is set based on the absolute position information of said mobile body.

14. (Previously Presented) A mobile body controller as claimed in Claim 2, further comprising a mobile body position indicator which displays information on the position of said mobile body estimated by said mobile body position estimator.

15. (Previously Presented) A mobile body controller as claimed in Claim 2, further comprising position information correcting means which corrects the position of said mobile body estimated by said mobile body position estimator based on absolute position information of said mobile body.

16. (Previously Presented) A mobile body controller as claimed in Claim 2, wherein the initial value of the position of said mobile body estimated by said mobile body position estimator is set based on the absolute position information of said mobile body.

17. (Currently Amended) A controller for a mobile body driven by a synchronous motor via a drive unit, the controller comprising:

a rotor position estimator which estimates a magnetic pole position of a rotor of said synchronous motor based on electrical quantities in relation to electric power supplied to said synchronous motor; and

a mobile body position estimator which estimates the position of said mobile body ~~based on~~ the magnetic pole position estimated by said rotor position estimator, the estimated position being usable to control the mobile body, said position of said mobile body being changed corresponding to a distance that said mobile body travels due to the revolution of said motor.

18. (Currently Amended) A method of controlling a mobile body driven by a synchronous motor via a drive unit, the method comprising the steps of:

estimating a magnetic pole position of a rotor of said synchronous motor based on electrical quantities in relation to electric power supplied to said synchronous motor, and

estimating the position of said mobile body ~~based on~~ said magnetic pole position estimated in the previous step, the estimated position being usable to control the mobile body, said position of said mobile body being changed corresponding to a distance that said mobile body travels due to the revolution of said motor.

19. (Previously Presented) A mobile body controller as claimed in claim 1, wherein said mobile body is an elevator car.

20. (Previously Presented) A mobile body controller as claimed in claim 2, wherein said mobile body is an elevator car.

21. (Previously Presented) A mobile body controller as claimed in claim 19, further comprising a mobile body position indicator, which displays the position information along floors or an elevator shaft of said elevator car estimated by said mobile body position estimator.

22. (Previously Presented) A mobile body controller as claimed in claim 20, further comprising a mobile body position indicator, which displays the position information along floors or an elevator shaft of said elevator car estimated by said mobile body position estimator.